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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,864	05/18/2006	Hai-il Ryu	45401-003US1	3836
69713 7590 11/23/2009 OCCHIUTI ROHLICEK & TSAO, LLP 10 FAWCETT STREET CAMBRIDGE, MA 02138				
EXAMINER HEINCE, LIAM J				
ART UNIT		PAPER NUMBER		
1796				
NOTIFICATION DATE		DELIVERY MODE		
11/23/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

INFO@ORTPATENT.COM

Office Action Summary

Application No.

10/579,864

Applicant(s)

RYU, HAI-IL

Examiner

Liam J. Heincer

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 3, 4 and 6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 4 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date 9/28/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (KR 2003-0093057) in view of Kaiser (US Pat. 4,572,815). Note: A machine translation is being used for KR 2003-0093057 and all citations will be directed towards the citation.

Considering Claim 1: Yu teaches a cornstalk product comprising a curing agent in weight of 0.3 parts with 2 parts of resin and 10 parts of cornstalk (Embodiment 6). 0.3 parts of curing agent per 12 parts of cornstalk and binder is equal to 2.5 parts per 100 parts.

Yu does not teach the binder as being a silicate. However, Kaiser teaches using sodium silicate as a binder in an lignocellulosic composite (3:28-40). Yu and Kaiser are analogous art as they are concerned with the same field of endeavor, namely lignocellulosic composites. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used the silicate of Kaiser as the binder for Yu and the motivation to do so would have been, as Kaiser suggests, it is a certified flame retardant adhesive for pressed panels (3:28-40).

Considering Claim 3: Yu teaches the curing agent as being ammonium chloride, magnesium chloride, aluminum chloride or ammonium phosphate (Claim 4).

Considering Claim 4: Yu teaches a method comprising mixed pulverized cornstalk with a binder; adding curing agent; then molding the material at 210 °C and a pressure of 12 ton/cm² (12,000 kgf/cm³) for 8 minutes (Embodiment 6). Yu teaches using a semiautomatic or multistage heat press (Claim 3).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yu (KR 2003-0093057) in view of Kaiser (US Pat. 4,572,815) as applied to claim 1 above, and further in view of Perlus et al. (US Pat. 3,840,388). Note: A machine translation is being used for KR 2003-0093057 and all citations will be directed towards the citation. Considering Claim 6: Yu and Kaiser collectively teach the board of claim 1 as shown above.

Yu et al. does not teach adding the claimed additives to the composition. However, Perlus et al. teaches adding a mixture of ammonium sulfamate/a sulfur containing flame retardant, ammonium phosphate/an inorganic flame retardant comprising a phosphoric acid, zinc chloride/a halogen containing flame retardant and sodium borate/an inorganic flame retardant and alkaline metal salt to a lignocellulosic composite (Claim 7). Yu et al. and Perlus et al. are analogous art as they are concerned with the same field of endeavor, namely the production of lignocellulosic composite boards. It would have been obvious to a person having ordinary skill in the art at the time of invention to have used the flame retardants of Perlus et al. in the composite of Yu, and the motivation to do so would have been, as Perlus et al. suggests, to increase the fire resistance of the board (Claim 7).

Yu et al. does not teach the claimed amounts of the additives. However, differences in concentration generally will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. See MPEP § 2144.05. As Perlus et al. teaches that the amount of flame retardant affects the flame spread rating of the board (4:45-56), a person having ordinary skill in the art at the time of invention would consider the amount of flame retardant to be a result effective variable. As such, a person having ordinary skill in the art at the time of invention would have found it obvious to optimize the amount of flame retardant through routine optimization, and the motivation to do so would have been to optimize the flame spread rating of the composite board.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 4, and 6 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liam J. Heincer whose telephone number is 571-270-3297. The examiner can normally be reached on Monday thru Friday 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on 571-272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

LJH
November 6, 2009